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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,716	08/07/2003	Kujin Lee		2724

7590 02/27/2007
Kujin LEE
20430 Via Pavisio E32
Cupertino, CA 95014

EXAMINER

GILES, NICHOLAS G

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/645,716

Applicant(s)

LEE ET AL.

Examiner

Nicholas G. Giles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Objections

2. Claims 1-8 are objected to because of the following informalities: The claims contain idiomatic language. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Pollard et al. (U.S. Pub. No. 2002/0113882).

Regarding claim 1, Pollard et al. discloses:

A method for eliminating a blooming streak of an acquired image,
comprising the steps of: acquiring a first image of an object formed a first

blooming streak by a light source therein, the first image of the object is photographed by a first photographing means together with the light source; differently positioning between the arrangement direction of CCD sensor of a second photographing means and the arrangement direction of CCD sensor of the first photographing means; acquiring a second image of the object formed a second blooming streak by the light source therein, wherein a formed angle of the second blooming streak is different from that of the first blooming streak and the second image is photographed by the second photographing means; searching and selecting a partial image in the second image, wherein the partial image corresponds to the first blooming streak in the first image; and generating a third image without the blooming streaks by replacing the first blooming streak with the partial image in the second image, which corresponds to the first blooming streak and is not bloomed (¶¶0092-0096 and Fig. 6, the CCD position is different with respect to the second light source and therefore the formed angle is different as well as the arrangement direction).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims **2 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard et al. in view of Monroe (U.S. Patent No. 7,023,913).

Regarding claim **2**, see the rejection of claim 1 and note that Pollard et al. further discloses the cameras being connected to a computer vision system in ¶0078. Pollard et al. is silent with regards to photographing in 360 degrees. Monroe discloses:

A type of multi camera module comprising a plurality of cameras which are symmetrically arranged at a specific point in a plane to omnidirectionally photograph, wherein each camera has a viewing angle allocated by 360.degree. divided by the number of the cameras (9:35-60 and Figs. 3a and 3b).

Monroe discloses that an advantage to providing this arrangement is that a full panoramic view of the desired scene to be monitored can be obtained in 9:53-55. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Pollard's method include photographing in 360 degrees.

Regarding claim **3**, see the rejection of claim 2 and note that Monroe further discloses:

Multi-camera module further comprising one or more camera(s) placed at the top thereof so that the camera(s) can photograph an object upward (10:10-14 and Fig. 6).

Monroe discloses that an advantage to providing an arrangement with a camera pointing upward is that universal coverage of any given space of volume can be

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obtained in 10:10-14. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Pollard's method include an arrangement with a camera pointing upward.

7. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard et al. in view of Monroe in further view of Bide (U.S. Patent No. 6,470,264).

Regarding claim 4, see the rejection of claim 2 and note that Monroe further discloses:

First frame grabbers each of which is electrically connected to each of the cameras of the multi-camera module, to grab photographed images by frames (inherent in any camera in order to obtain an image).

Monroe further discloses:

A storage means electrically connected to each frame grabber, to store images photographed by the cameras according to photographing location and photographing time (9:6-12, 11:19-36, and Fig. 11).

Monroe discloses that an advantage to time-stamping images is that the exact time a trigger event occurs can be recorded and archived for later retrieval and analysis in 8:65-9:6. Monroe discloses in 11:19-36 that an advantage to storing photographs according to photographing location is that the images can be merged and cropped to provide a continuous and smooth panoramic image. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have

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Pollard's method modified by Monroe include time-stamping images and storing photographs according to photographing location.

Pollard and Monroe are silent with regards to calculating exposure by frames and transmitting that exposure. Official Notice is taken that it was well known at the time the invention was made to calculate exposure based on grabbed images and transmitting the exposure. An advantage to doing so is that exposure times can be corrected for future images in order to obtain a preferable image. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Pollard's method modified by Monroe further include calculating exposure by frames and transmitting that exposure.

Pollard and Monroe are silent with regards to a GPS sensor, photographing time, a distance sensor, a direction sensor, and an annotation unit connected to the GPS sensor, the distance sensor, and the direction sensor to calculate location, direction, and time, and to enter the data in a frame as annotation. Bide discloses:

A GPS sensor to sense the photographing location (3:11-23) and photographing time as data (3:24-33); a distance sensor (4:8-41) and a direction sensor (2:61-3:10) for respectively sensing the distance and direction of the image photographed by each camera; an annotation entering unit electrically connected to the GPS sensor, the distance sensor and the direction sensor, to calculate location, direction and time corresponding to each frame based on the sensed data, the annotation entering unit being electrically connected to the storage means to enter

the calculated location and time in each frame as annotation (2:61-3:33, 4:8-41, 5:17-35, and 5:56-62);

Bide discloses that an advantage to providing these elements is that fully synchronized commentary can be provided as a final product in 5:56-62. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Pollard's method modified by Monroe further include GPS sensor, photographing time, a distance sensor, a direction sensor, and an annotation unit connected to the GPS sensor, the distance sensor, and the direction sensor to calculate location, direction, and time, and to enter the data in a frame as annotation.

Bide further discloses:

Trigger signal generator electrically connected between the storage means, and electrically connected either the exposure signal generator, or camera selectively and electrically connected between the distance sensor and the annotation entering unit, the trigger signal generator to selectively transmits a trigger signal to the exposure signal generator or camera selectively and the annotation entering unit in order that the cameras start to photograph the objects according to the trigger signal (2:61-3:33, 4:8-41, 5:17-35, and 5:56-62, the trigger signal generator is inherent to in order to know when to capture images or frames).

Bide discloses that an advantage to a trigger signal generator is that fully synchronized commentary can be provided as a final product in 5:56-62. For this reason it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to have Pollard's method modified by Monroe further include a trigger generator according the claim.

Regarding claim 5, see the rejection of claim 4 and note that Pollard, Monroe, and Bide are silent with regards to light intensity sensor for the exposure calculator to allow the exposure calculator to be able to calculate exposure. Official Notice is taken that light sensors providing data to exposure calculators was well known at the time. An advantage to using light sensors is that images wouldn't be underexposed or overexposed. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Pollard's method modified by Monroe further modified by Bide include light intensity sensor for the exposure calculator to allow the exposure calculator to be able to calculate exposure.

Regarding claim 6, see the rejection of claim 4 and note that Bide further discloses:

Storage means comprising one of digital storage devices including a hard disk, compact disk, magnetic tape and memory (5:56-62, there is some type of memory in order to access the data later).

An advantage to using a memory is that the recording information can be access later for editing as Bide discloses in 5:56-62. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Pollard's method modified by Monroe include memory.

Regarding claim 7, see the rejection of claim 4 and note that Monroe further discloses:

Audio digital converter electrically connected to the storage means, the audio digital converter converting an audio signal sensed by an audio sensor into a digital signal as an audio clip to correspondingly attach to give the storage means a unique audio clip corresponding to each image or image group to be stored in the storage means (8:40-42 and 8:63-9:5).

Monroe discloses that an advantage to providing an audio digital converter and attaching the audio for an image or image group is that it can be archived for later retrieval and analysis in 8:63-9:5. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Pollard's method modified by Monroe include providing an audio digital converter and attaching the audio for an image or image group.

Regarding claim 8, see the rejection of claim 4 and note that Monroe further discloses:

Video camera electrically connected to the storage means via a frame grabber for grabbing photographed moving pictures by frames, to give the storage means a unique video clip corresponding to each image or image group to be stored in the storage means (8:58-9:5).

Monroe discloses that an advantage to providing capturing images by frames to provide a unique video clip for an image or image group is that it can be archived for later retrieval and analysis in 8:63-9:5. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Pollard's

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method modified by Monroe include capturing images by frames to provide a unique video clip for an image or image group.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas G. Giles whose telephone number is (571) 272-2824. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc - Yen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NGG


NGOC-YEN VU
SUPERVISORY PATENT EXAMINER